SEQUENCE LISTING

```
<110> Holloway, James L.
           Lok. Si
           Jaspers, Stephen R.
     <120> Insulin Homolog Polypeptide Zins4
     <130> 00-18
     <150> 60/188.544
     <151> 2000-03-10
     <160> 12
     <170> FastSEO for Windows Version 3.0
     <210> 1
     <211> 429
     <212> DNA
     <213> Homo sapiens
     <220>
     <221> CDS
      <222> (1)...(429)
     <400> 1
atg qcc agg tac atg ctg ctg ctc ctg gcg gta tgg gtg ctg acc
                                                                     48
Met Ala Arg Tyr Met Leu Leu Leu Leu Leu Ala Val Trp Val Leu Thr
                                    10
ggg gag ctg tgg ccg gga gct gag gcc cgg gca gcg cct tac ggg gtc
                                                                      96
Gly Glu Leu Trp Pro Gly Ala Glu Ala Arg Ala Ala Pro Tyr Gly Val
                                                    30
            20
                                25
                                                                     144
agg ctt tgc ggc cga gaa ttc atc cga gca gtc atc ttc acc tgc ggg
Arg Leu Cys Gly Arg Glu Phe Ile Arg Ala Val Ile Phe Thr Cys Gly
                                                45
                            40
        35
ggc tcc cgg tgg aga cga tca gac atc ctg gcc cac gag gct atg gga
                                                                     192
Gly Ser Arg Trp Arg Arg Ser Asp Ile Leu Ala His Glu Ala Met Gly
    50
                        55
                                            60
```

										gac Asp 75						240
										ctg Leu						288
										tgg Trp						336
										ggc Gly						384
										agt Ser				tag *		429
<210> 2 <211> 142 <212> PRT <213> Homo sapiens																
	<400> 2															
Met 1	Ala	Arg	Tyr	Met 5	Leu	Leu	Leu	Leu	Leu 10	Ala	۷a٦	Trp	Val	Leu 15	Thr	
	Glu	Leu	Trp 20		Gly	Ala	G1 u	A1 a 25		Ala	Ala	Pro	Tyr 30	Gly	Val	
Arg	Leu	Cys 35		Arg	Glu	Phe	Ile 40		Ala	۷a۱	Ile	Phe 45		Cys	Gly	
Gly	Ser 50		Trp	Arg	Arg	Ser 55		Ile	Leu	Ala	His 60		Ala	Met	Gly	
Asp 65		Phe	Pro	Asp	A1 a 70		Ala	Asp	Glu	Asp 75		Leu	Ala	Gly	G1u 80	
	Asp	Glu	Ala	Met 85		Ser	Ser	Glu	Trp 90	Leu	Ala	Leu	Thr	Lys 95	Ser	

```
Pro Gln Ala Phe Tyr Arg Gly Arg Pro Ser Trp Gln Gly Thr Pro Gly
           100
                              105
Val Leu Arg Gly Ser Arg Asp Val Leu Ala Gly Leu Ser Ser Ser Cys
                          120
       115
Cys Lys Trp Gly Cys Ser Lys Ser Glu Ile Ser Ser Leu Cys
   130
                      135
                                         140
     <210> 3
     <211> 14
     <212> PRT
     <213> Artificial Sequence
     <220>
     <223> Cysteine motif
     <221> VARIANT
     <222> (3)...(13)
      <223> Each Xaa is independently any amino acid residue
           except cysteine.
      <400> 3
10
      <210> 4
      <211> 15
      <212> PRT
      <213> Artificial Sequence
      <220>
      <223> Motif
      <221> VARIANT
      <222> (3)...(5)
      <223> Each Xaa is independently any amino acid residue
           except cysteine.
      <221> VARIANT
      <222> (4)...(14)
      <223> Each Xaa is independently any amino acid residue
            except cysteine.
      <400> 4
```

```
Cys Cys Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
     <210> 5
     <211> 5
     <212> PRT
     <213> Artificial Sequence
     <220>
     <223> Motif
     <221> VARIANT
     <222> (2)...(4)
     <223> Each Xaa is independently any amino acid residue
           excépt cysteine.
     <400> 5
Arg Xaa Xaa Xaa Arg
                5
1
     <210> 6
     <211> 426
     <212> DNA
     <213> Artificial Sequence
     <220>
     <223> Degenerate polynucleotide sequence encoding the
           polypeptide of SEQ ID NO:2.
     <221> variation
     <222> (1)...(426)
     <223> Each N is independently A, T, G, or C.
      <400> 6
atggcnmgnt ayatgytnyt nytnytnytn gengtntggg tnytnaengg ngarytntgg
                                                                     60
conggngong argonmgngo ngoncontay ggngtnmgny tntgyggnmg ngarttyath
                                                                     120
mgngcngtna thttyacntg yggnggnwsn mgntggmgnm gnwsngayat hytngcncay
                                                                    180
gargenatgg gngayaentt yeengaygen gaygengayg argaywsnyt ngenggngar
                                                                     240
ytngaygarg cnatgggnws nwsngartgg ytngcnytna cnaarwsncc ncargentty
                                                                     300
taymgnggnm gnccnwsntg gcarggnacn ccnggngtny tnmgnggnws nmgngaygtn
                                                                     360
ytngcnggny tnwsnwsnws ntgytgyaar tggggntgyw snaarwsnga rathwsnwsn
                                                                     420
                                                                     426
ytntqy
```

```
<210> 7
      <211> 25
      <212> DNA
      <213> Artificial Sequence
      <220>
      <223> Oligonucleotide ZC9736
      <400> 7
ccatacccct gacccctgtt gagat
                                                                25
      <210> 8
      <211> 25
      <212> DNA
      <213> Artificial Sequence
      <220>
      <223> Oligonucleotide ZC9740
      <400> 8
cagaggttcc ctgataccca cacat
                                                                 25
      <210> 9
      <211> 55
      <212> DNA
      <213> Artificial Sequence
      <220>
      <223> Exon 1 sense oligonucleotide primer
      <400> 9
tgaagaaggtc tcgaattcgt cgacaccatg gccaggtaca tgctgctgct gctc
                                                                      55
      <210> 10
      <211> 45
      <212> DNA
      <213> Artificial Sequence
      <220>
      <223> Exon 1 antisense oligonucleotide primer
      <400> 10
                                                                   45
tgaagaaggt ctcactccca tagcctcgtg ggccaggatg tctga
```

```
<210> 11
      <211> 41
      <212> DNA
      <213> Artificial Sequence
      <220>
      <223> Exon 2 sense oligonucleotide primer
      <400> 11
tgaagaaggt ctcaggagat accttcccgg atgcagatgc t
                                                                    41
      <210> 12
      <211> 52
      <212> DNA
     <213> Artificial Sequence
      <220>
     <223> Exon 2 antisense oligonucleotide primer
     <400> 12
tgaagaaggt ctctctagaa ctctagcaaa ggctactgat ttcacttttg ct
                                                                   52
```